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Version 1.0

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Federal Communications Commission (FCC)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver
- Connect the equipment onto an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help

Shielded interconnect cables and a shielded AC power cable must be employed with this equipment to ensure compliance with the pertinent RF emission limits governing this device. Changes or modifications not expressly approved by the system's manufacturer could void the user's authority to operate the equipment.

Declaration of Conformity

This device complies with part 15 of the FCC rules. Operation is subject to the following conditions:

- This device may not cause harmful interference.
- This device must accept any interference received, including interference that may cause undesired operation.

This device is in conformity with the following EC/EMC directives:

- ❑ **EN 55022** Limits and methods of mesurement of radio disturbance characteristics of information technology equipment
- ❑ **EN 61000-3-2** Disturbances in supply systems caused
- ❑ **EN 61000-3-3** Disturbances in supply systems caused by household appliances and similar electrical equipment " Voltage fluctuations"
- ❑ **EN 55024** Information technology equipment-Immunity characteristics-Limits and methods of measurement
- ❑ **EN 60950** Safety for information technology equipment including electrical business equipment
- ❑ **CE marking** CE

Canadian Department of Communications

This class B digital apparatus meets all requirements of the Canadian Interference-causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Réglement sur le matériel brouilieur du Canada.

About the Manual

The manual consists of the following:

Chapter 1 **Introducing the Motherboard**	Describes features of the motherboard.	⇨ page 1
Chapter 2 **Installing the Motherboard**	Describes installation of motherboard components.	⇨ page 7
Chapter 3 **Using BIOS**	Provides information on using the BIOS Setup Utility.	⇨ page 25
Chapter 4 **Trouble Shooting**	Provides basic trouble shooting tips.	⇨ page 47

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Chapter 1
Introducing the Motherboard

Introduction

Thank you for choosing the **TIGD2-I** motherboard of high performance, enhanced function. This motherboard has **Onboard D2550 CPU** with a Thin Mini-ITX form factor of 170 x 170 mm.

This motherboard is based on **Intel® NM10** Express Chipset. It supports up to **4 GB** of system memory with single channel **DDR3 SO-DIMM 1066/800 MHz**. One optional PCI slot is supported.

It implements an EHCI compliant interface that provides eight USB 2.0 ports (four USB 2.0 ports at the rear panel and two USB 2.0 headers support additional four USB 2.0 ports).

The motherboard is equipped with a full set of I/O ports in the rear panel, including PS/2 mouse and keyboard connectors, one DC-IN port, one VGA port, one DVI port, two RJ45 LAN connectors, four USB 2.0 ports, and audio jacks for microphone and line-out.

In addition, this motherboard supports two SATA 3.0Gb/s connectors for expansion.

Package Contents

Your motherboard package ships with the following items:

- ❑ TIGD2-I Motherboard
- ❑ User Manual
- ❑ I/O Shield
- ❑ 2 SATA 3.0Gb/s Cables

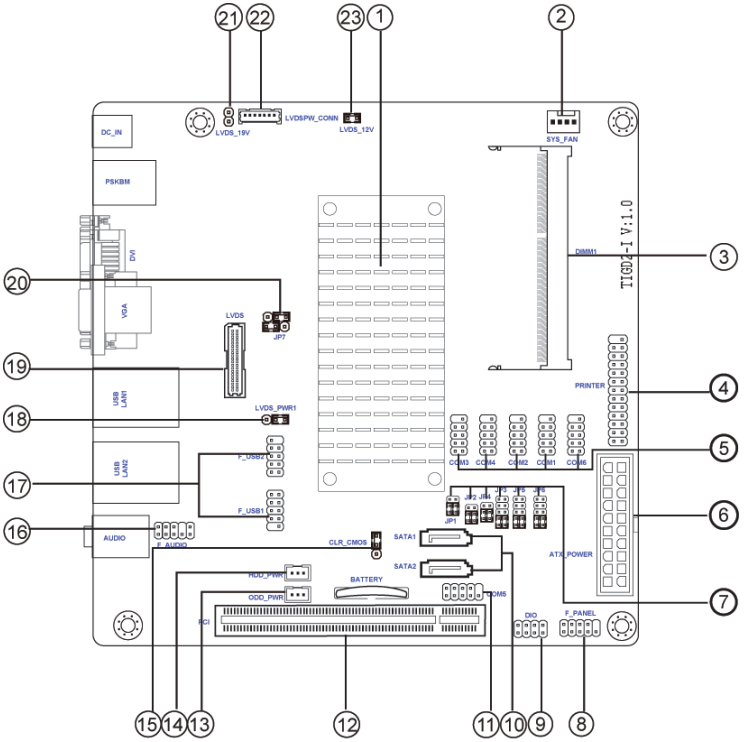
The package contents above are for reference only, please take the actual package items as standard.

Specifications

CPU	• Intel® Onboard D2550 CPU • Intel TDP 10W
Chipset	• Intel® NM10 Chipset
Memory	• Single channel DDR3 SO-DIMM memory architecture • 1 x 204-pin DDR3 SO-DIMM sockets support up to 4 GB • Supports DDR3 1066/800 MHz DDR3 SDRAM
Expansion Slots	• 1 x PCI slot
Storage	• Supported by Intel® NM10 Express Chipset - 2 x Serial ATA 3.0Gb/s devices
Audio	• Realtek ALC662 VD - 2.1 Channel High Definition Audio Codec - Compliant with HD audio specification
LAN	• Dual LAN 8111E(VL) Gigabit Lan - 10/100/1000 Fast Ethernet Controller - Wake-on-LAN and remote wake-up support
Rear Panel I/O	• 1 x DC-IN port • 1 x PS/2 keyboard and PS/2 mouse connectors • 1 x D-Sub port (VGA) • 1 x DVI port • 4 x USB 2.0 ports • 2 x RJ45 LAN connectors • 1 x Audio port (1x Line out, 1x Mic_in Rear)
Internal I/O Connectors & Headers	• 1 x 20-pin ATX Power Supply connector • 1 x 4-pin SYS_FAN connector • 2 x USB 2.0 header supports additional four USB 2.0 ports • 2 x Serial SATA 3.0Gb/s connectors • 6 x COM headers • 6 x COM setting jumpers • 1 x LVDS S/D channel & output data format setting jumper • 1 x LVDS connector • 1 x Printer header • 1 x HDD_PWR connector • 1 x ODD_PWR connector • 1 x DIO header • 1 x LVDS Power header • 1 x LVDS Power select jumper • 1 x LVDS_12V header • 1 x LVDS_19V header • 1 x Front Panel audio header • 1 x Front Panel switch/LED header • 1 x CLR_CMOS header

System BIOS	•	AMI BIOS with 16Mb SPI Flash ROM - Supports Plug and Play, STR(S3)/STD(S4), Multi-Language - Supports Hardware Monitor - Supports ACPI 3.0 version & DMI - Supports Audio, LAN, can be disabled in BIOS - Supports Dual-Monitor function - F7 hot key for boot up devices option
Form Factor	•	Thin Mini-ITX Size, 170mm x 170mm

Motherboard Components

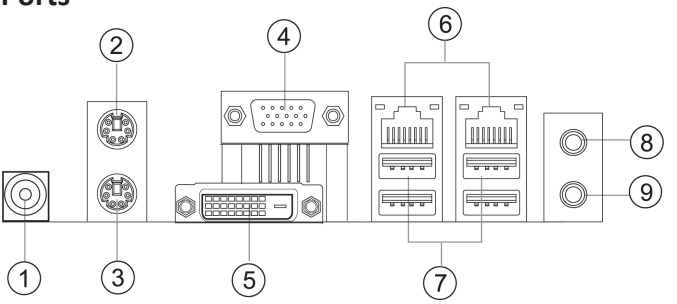


This picture may be different due to Optional Features on speccifications.

Table of Motherboard Components

LABEL	COMPONENTS
1. CPU	Onboard D2550 CPU
2. SYS_FAN	4-pin system cooling fan connector
3. DIMM1	204-pin DDR3 SDRAM SO-DIMM
4. PRINTER	Printer header
5. COM3/4/2/1/6	Onboard serial port headers
6. ATX_POWER	20-pin ATX power connector
7. JP1/2/4/3/5/6	COM setting jumpers
8. F_PANEL	Front panel switch/LED header
9. DIO	DIO header
10. SATA1~2	Serial ATA 3.0 Gb/s connectors
11. COM5	Onboard serial port header
12. PCI	32-bit add-on card slot
13. ODD_PWR	ODD power connector
14. HDD_PWR	HDD power connector
15. CLR_CMOS	Clear CMOS jumper
16. F_AUDIO	Front panel audio header
17. F_USB1~2	Front panel USB 2.0 headers
18. LVDS_PWR1	LVDS power select jumper
19. LVDS	LVDS header
20. JP7	LVDS S/D channel & output data format setting jumper
21. LVDS_19V	19V LVDS power header
22. LVDSPW_CONN	LVDS power connector
23. LVDS_12V	12V LVDS power header

I/O Ports



1. DC_IN Port
Connect the DC_IN port to the power adapter.

2. PS/2 Mouse(green)
Use the upper PS/2 port to connect a PS/2 mouse.

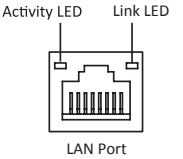
3. PS/2 Keyboard(purple)
Use the lower PS/2 port to connect a PS/2 keyboard.

4. VGA Port
Connect your monitor to the VGA port.

5. DVI Port
You can connect the display device to the DVI port.

6. LAN Ports
Connect an RJ-45 jack to the LAN port to connect your computer to the Network.

LAN LED	Status	Description
Activity LED	OFF	No data
	Yellow blinking	Active
Link LED	OFF	No link
	Green/Orange	Link



7. USB 2.0 Ports
Use the USB 2.0 ports to connect USB 2.0 devices.

8. Line-out(lime)
It is used to connect to speakers or headphones.

9. Microphone(pink)
It is used to connect to a microphone.

Chapter 2
Installing the Motherboard

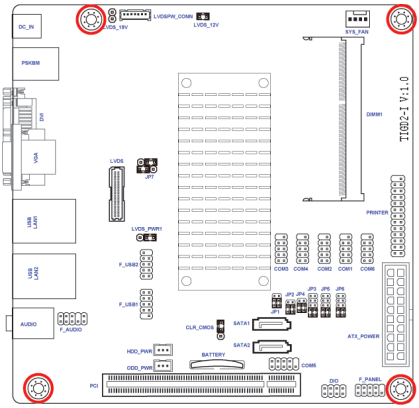
2-1. Safety Precautions

Follow these safety precautions when installing the motherboard:

- Wear a grounding strap attached to a grounded device to avoid damage from static electricity.
- Discharge static electricity by touching the metal case of a safely grounded object before working on the motherboard.
- Leave components in the static-proof bags.
- Always remove the AC power by unplugging the power cord from the power outlet before installing or removing the motherboard or other hardware components.

2-2. Installing the motherboard in a Chassis

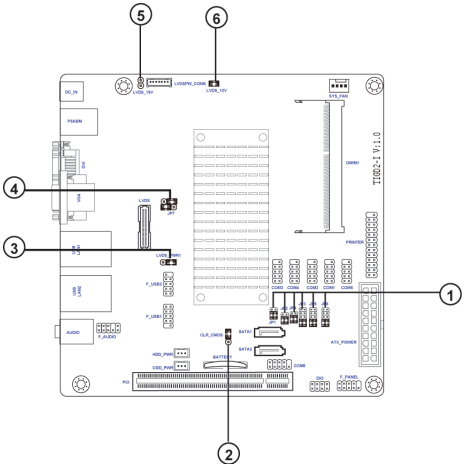
This motherboard carries a Thin Mini-ITX form factor of 170 x 170 mm. Choose a chassis that accommodates this form factor. Make sure that the I/O template in the chassis matches the I/O ports installed on the rear edge of the motherboard. Most system chassis have mounting brackets installed in the chassis, which corresponds to the holes in the motherboard. Place the motherboard over the mounting brackets and secure the motherboard onto the mounting brackets with screws.



Do not over-tighten the screws as this can stress the motherboard.

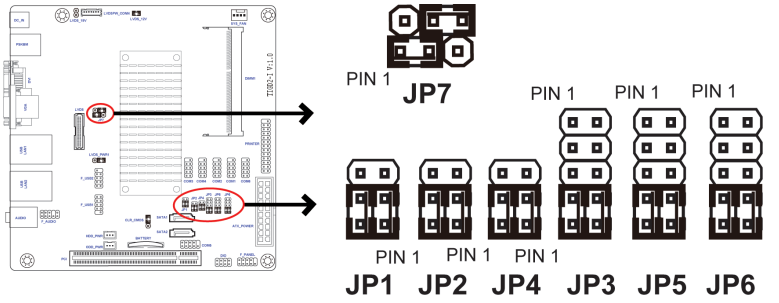
2-3. Checking Jumper Settings

The following illustration shows the location of the motherboard jumpers. Pin 1 is labeled.



No.	Components	No.	Components
1	JP1/2/4/3/5/6	4	JP7
2	CLR_CMOS	5	LVDS_19V
3	LVDS_PWR1	6	LVDS_12V

1 & 4. JP1/2/4/3/5/6 & JP7: COM Setting Jumpers & LVDS S/D channel and LVDS output data format setting jumper



COM setting

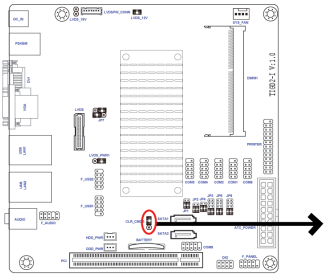
PIN1，9 OUTPUT		PIN9			PIN1			Default
		5V	12V	RI	5V	12V	DCD	
COM1	JP6	(1-3)	(3-5)	(7-9)	(2-4)	(4-6)	（8-10）	（8-10）
COM2	JP5	(1-3)	(3-5)	(7-9)	(2-4)	(4-6)	（8-10）	*
COM3	JP3	NA	NA	NA	(1-3)	(3-5)	(7-9)	(7-9)
COM5	JP3	NA	NA	NA	(2-4)	(4-6)	（8-10）	

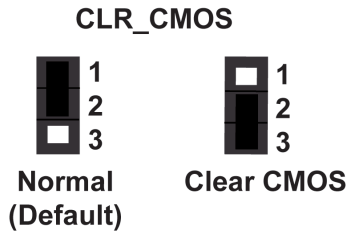
COM3	JP1	(1-3)(2-4)	RS232
		(3-5)(4-6)	TTL
COM5	JP4	(1-3)(2-4)	RS232
		(3-5)(4-6)	TTL
COM4	JP2	(1-3)(2-4)	RS232
		(3-5)(4-6)	RS485

LVDS S/D channel & output data format setting

JP7	(1-3)	Dual channel
	(3-5)	Single channel
JP7	(2-4)	18bit
	(4-6)	24bit

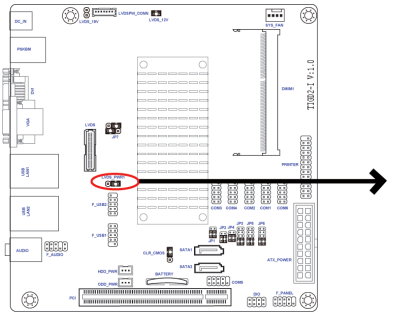
2. CLR_CMOS: Clear CMOS Jumper

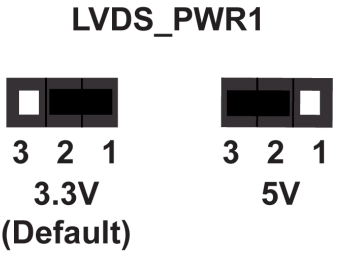




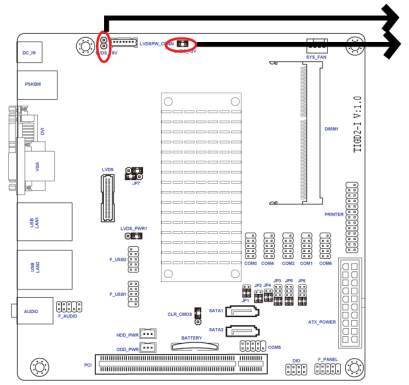
To avoid the system instability after clearing CMOS, we recommend users to enter the main BIOS setting page to "Load Default Settings" and then "Save and Exit Setup".

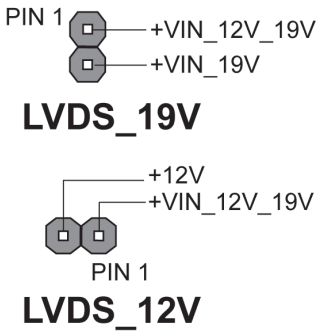
3. LVDS_PWR1: LVDS Power Select Jumper





5&6. LVDS_19V & LVDS_12V: LVDS Power Jumper



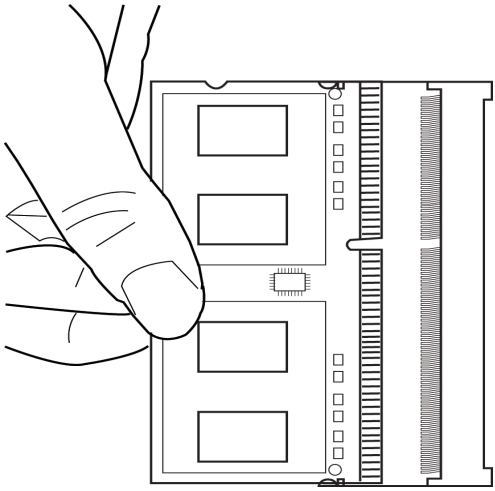


2-4. Installing Hardware

2-4-1. Installing Memory Modules

- This motherboard accommodates one memory module. It can support one 204-pin DDR3 SO-DIMM 1066/800.
- Do not remove any memory module from its antistatic packaging until you are ready to install it on the motherboard. Handle the modules only by their edges. Do not touch the components or metal parts. Always wear a grounding strap when you handle the modules.
- You must install one module in SO_DIMM1 slot. Total memory capacity is 4 GB.
- Refer to the following to install the memory modules.

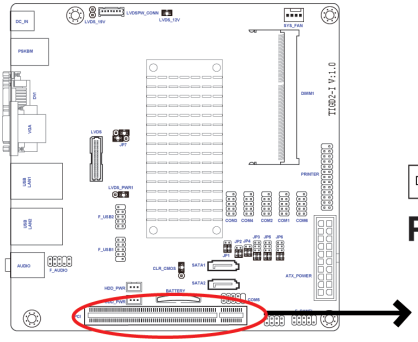
Install the DIMM module into the slot and press it firmly down until it fits in place. Check that the cutouts on the DIMM module edge connector match the notches in the DIMM slot.

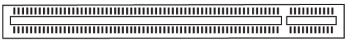


** For reference only*

2-4-2. Installing Add-on Cards

The slots on this motherboard are designed to hold expansion cards and connect them to the system bus. Expansion slots are a means of adding or enhancing the motherboard's features and capabilities. With these efficient facilities, you can increase the motherboard's capabilities by adding hardware that performs tasks that are not part of the basic system.





PCI

PCI Slot

This motherboard is equipped with one standard PCI slot. PCI stands for Peripheral Component Interconnect and is a bus standard for expansion cards, which for the most part, is a supplement of the older ISA bus standard. The PCI slot on this board is PCI v2.3 compliant.

Before installing an add-on card, check the documentation for the card carefully. If the card is not Plug and Play, you may have to manually configure the card before installation.

Follow these instructions to install an add-on card:

1 Remove a blanking plate from the system case corresponding to the slot you are going to use.

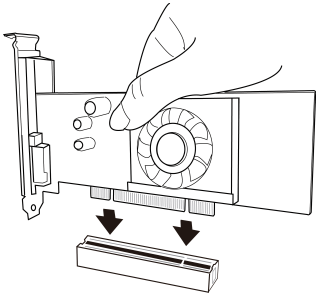
2 Install the edge connector of the add-on card into the expansion slot. Ensure that the edge connector is correctly seated in the slot.

3 Secure the metal bracket of the card to the system case with a screw.

1. For some add-on cards, for example graphics adapters and network adapters, you have to install drivers and software before you can begin using the add-on card.

2. The onboard PCI interface does not support 64-bit SCSI cards.

Please refer to the following illustrations to install the add-on card:

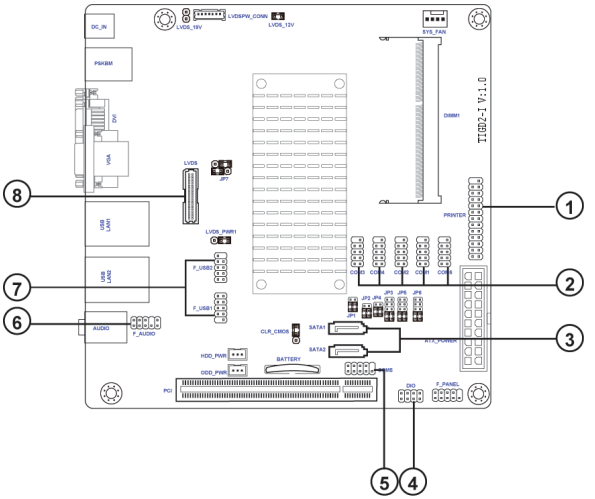


** For reference only*

Install the VGA Card in the PCI slot

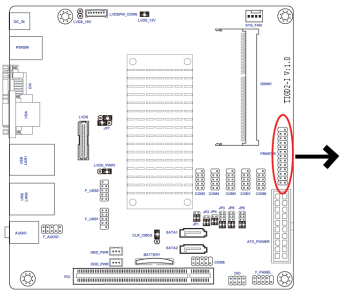
2-4-3. Connecting Optional Devices

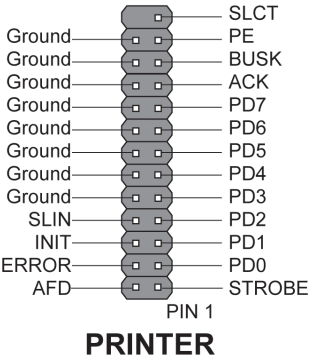
Refer to the following for information on connecting the motherboard's optional devices:



No.	Components	No.	Components
1	PRINTER	5	COM5
2	COM3/4/2/1/6	6	F_AUDIO
3	SATA1~2	7	F_USB1~2
4	DIO	8	LVDS

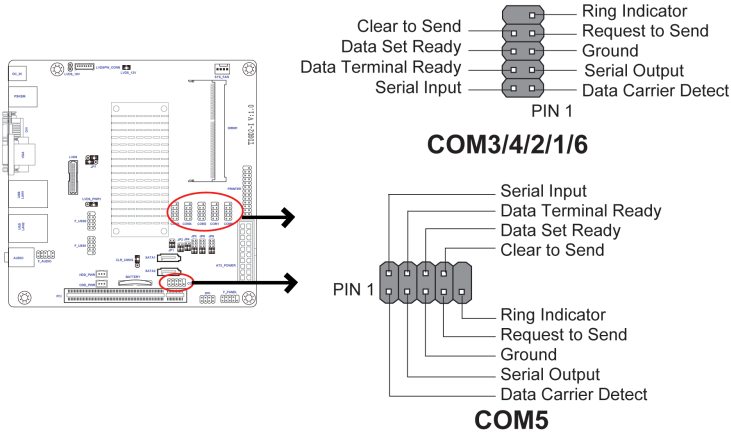
1 PRINTER: Printer Header





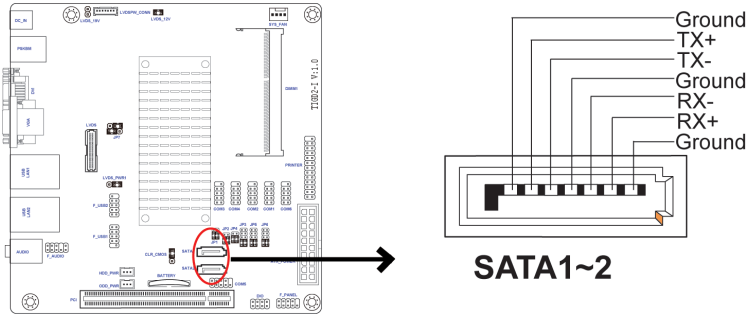
2 & 5. COM2/1/4/3/6 & COM5: Onboard Serial Port Headers

Connect a serial port extension bracket to this header to add a serial port to your system.

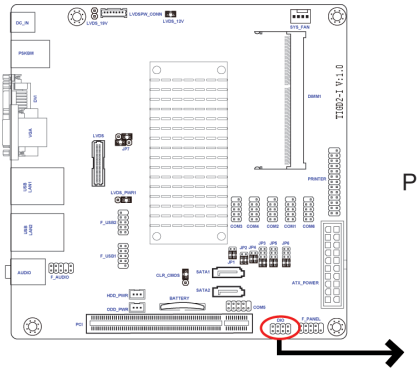


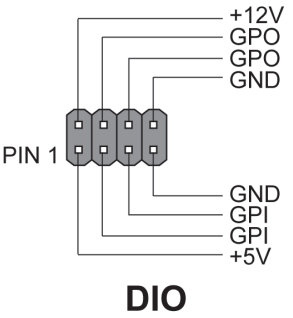
3. SATA1~2: Serial ATA connectors

SATA1~2 connectors are used to support the Serial ATA 3.0Gb/s devices, simpler disk drive cabling and easier PC assembly. It eliminates limitations of the current Parallel ATA interface. But maintains register compatibility and software compatibility with Parallel ATA.



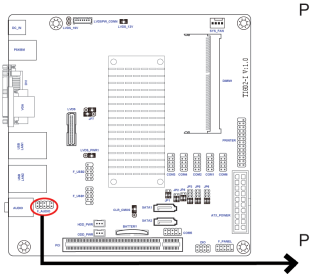
4. DIO: DIO Header

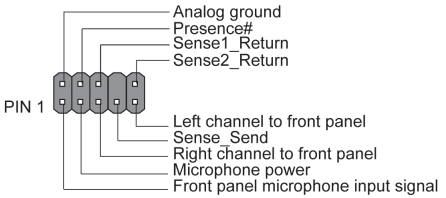


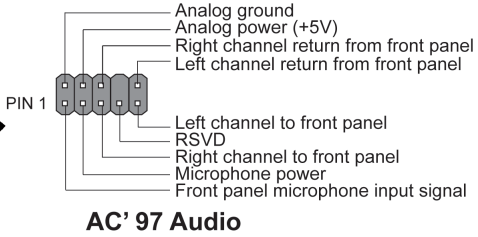


6. F_AUDIO: Front Panel Audio Header

The front panel audio header allows the user to install auxiliary front-oriented microphone and line-out ports for easier access. This header supports HD audio by default. If you want connect an AC' 97 front panel audio to HD onboard headers, please set as below picture.

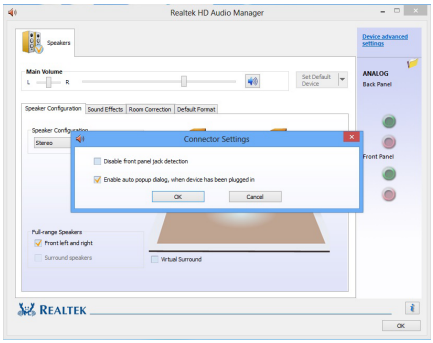






AC' 97 Audio Configuration: To enable the front panel audio connector to support AC97 Audio mode.

If you use AC' 97 Front Panel, please tick off the option of "Disabled Front Panel Detect ". If you use HD Audio Front Panel, please don' t tick off "Disabled Front Panel Detect ".



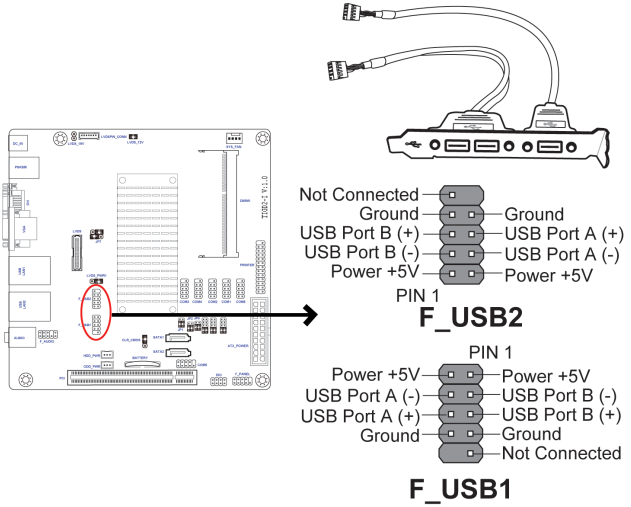
** For reference only*

If you use AC' 97 Front Panel, please don' t tick off "Using Front Jack Detect ". If you use HD Audio Front Panel, please tick off the option of "Using Front Jack Detect ".

** For reference only*

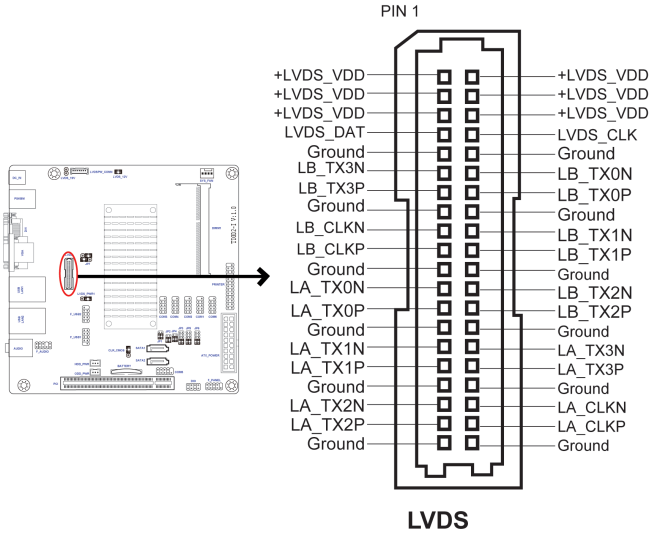
7. F_USB1~2: Front Panel USB 2.0 headers

The motherboard has two USB 2.0 headers supporting four USB 2.0 ports. Additionally, some computer cases have USB ports at the front of the case. If you have this kind of case, use auxiliary USB connector to connect the front-mounted ports to the motherboard.



Please make sure that the USB cable has the same pin assignment as indicated above. A different pin assignment may cause damage or system hang-up.

8. LVDS: LVDS Interface



2-4-4. Installing a Hard Disk Drive/Optical Disk Drive/SATA Hard Drive

This section describes how to install a Hard Disk Drive/Optical Disk Drive/SATA Hard Drive.

About SATA Connectors

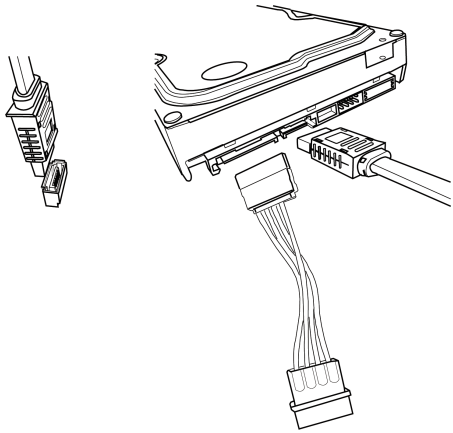
Your motherboard features two SATA connectors supporting a total of two drives. SATA refers to Serial ATA (Advanced Technology Attachment) is the standard interface for the IDE hard drives which are currently used in most PCs. These connectors are well designed and will only fit in one orientation. Locate the SATA connectors on the motherboard and follow the illustration below to install the SATA hard drives.

Installing a Hard Disk Drive/Optical Disk Drive/Serial ATA Hard Drives

To install the Hard Disk Drive (HDD)/Optical Disk Drive (ODD)/Serial ATA (SATA) hard drives, use the HDD/ODD/SATA cable that supports the Hard Disk Drive/Optical Disk Drive/Serial ATA protocol. This HDD/ODD/SATA cable comes with a HDD/ODD/SATA power cable. You can connect the comb end of the HDD/ODD/SATA cable to the Hard Disk Drive/Optical Disk Drive and connect the other end to the connectors on the motherboard.

Refer to the illustration below for proper installation:

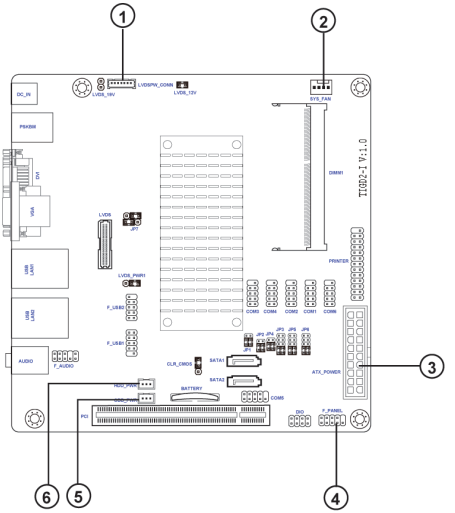
1 Attach either cable end to the connector on the motherboard.
2 Attach the other cable end to the SATA hard drive.
3 Attach the SATA power cable to the SATA hard drive and connect the other end to the power supply.



** For reference only*

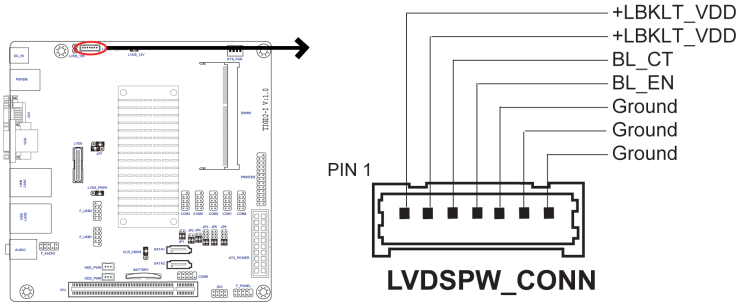
2-4-5. Connecting Case Components

After you have installed the motherboard into a case, you can begin connecting the motherboard components. Refer to the following:



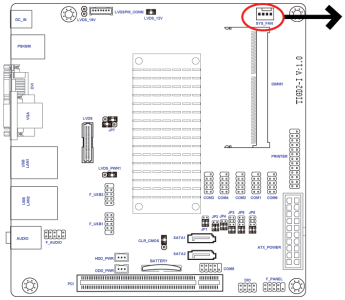
No.	Components	No.	Components
1	LVDSPW_CONN	4	F_PANEL
2	SYS_FAN	5	HDD_PWR
3	ATX_POWER	6	ODD_PWR

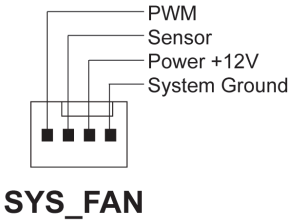
1. LVDSPW_CONN: LVDS Power Connector



2. SYS_FAN : System Cooling FAN Power Connector

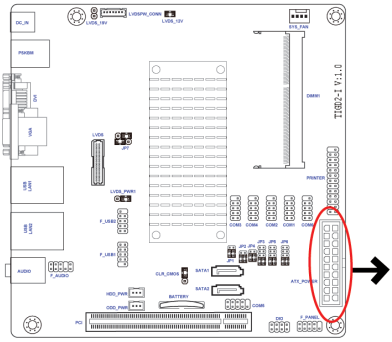
Connect the system cooling fan cable to **SYS_FAN**.

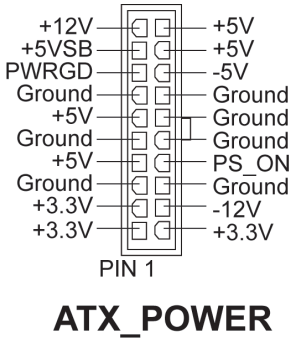




3. ATX_POWER: ATX 20-pin Power Connector

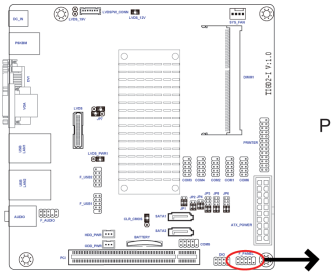
Connect the standard power supply connector to **ATX_POWER.**

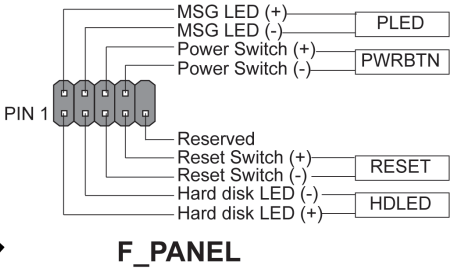




4. Front Panel Header

The front panel header (F_PANEL) provides a standard set of switch and LED headers commonly found on ATX or Micro ATX cases.





Hard Drive Activity LED

Connecting pins 1 and 3 to a front panel mounted LED provides visual indication that data is being read from or written to the hard drive. For the LED to function properly, an IDE drive should be connected to the onboard IDE interface. The LED will also show activity for devices connected to the SCSI (hard drive activity LED) connector.

Power/Sleep/Message waiting LED

Connecting pins 2 and 4 to a single or dual-color, front panel mounted LED provides power on/off, sleep, and message waiting indication.

Reset Switch

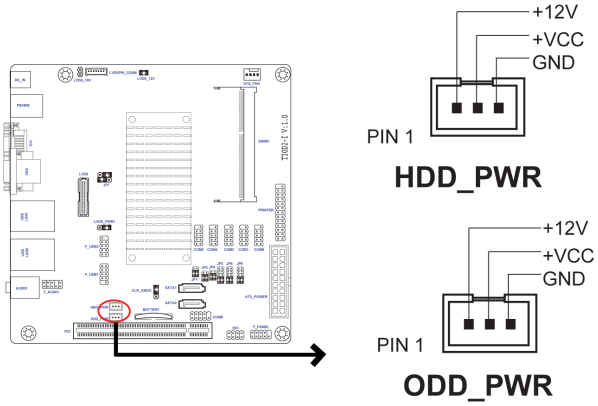
Supporting the reset function requires connecting pin 5 and 7 to a momentary-contact switch that is normally open. When the switch is closed, the board resets and runs POST.

Power Switch

Supporting the power on/off function requires connecting pins 6 and 8 to a momentary-contact switch that is normally open. The switch should maintain contact for at least 50 ms to signal the power supply to switch on or off. The time requirement is due to internal de-bounce circuitry. After receiving a power on/off signal, at least two seconds elapses before the power supply recognizes another on/off signal.

5 & 6. HDD_PWR & ODD_PWR: HDD Power & ODD Power Connectors

Connect the HDD power cable to **HDD_PWR**.
Connect the ODD power cable to **ODD_PWR**.



This concludes Chapter 2. The next chapter covers the BIOS.

Memo

Chapter 3
Using BIOS

About the Setup Utility

The computer uses the latest "American Megatrends Inc." BIOS with support for Windows Plug and Play. The CMOS chip on the motherboard contains the ROM setup instructions for configuring the motherboard BIOS.

The BIOS (Basic Input and Output System) Setup Utility displays the system's configuration status and provides you with options to set system parameters. The parameters are stored in battery-backed-up CMOS RAM that saves this information when the power is turned off. When the system is turned back on, the system is configured with the values you stored in CMOS.

The BIOS Setup Utility enables you to configure:

- Hard drives, diskette drives and peripherals
- Video display type and display options
- Password protection from unauthorized use
- Power Management features

The settings made in the Setup Utility affect how the computer performs. Before using the Setup Utility, ensure that you understand the Setup Utility options.

This chapter provides explanations for Setup Utility options.

The Standard Configuration

A standard configuration has already been set in the Setup Utility. However, we recommend that you read this chapter in case you need to make any changes in the future.

This Setup Utility should be used:

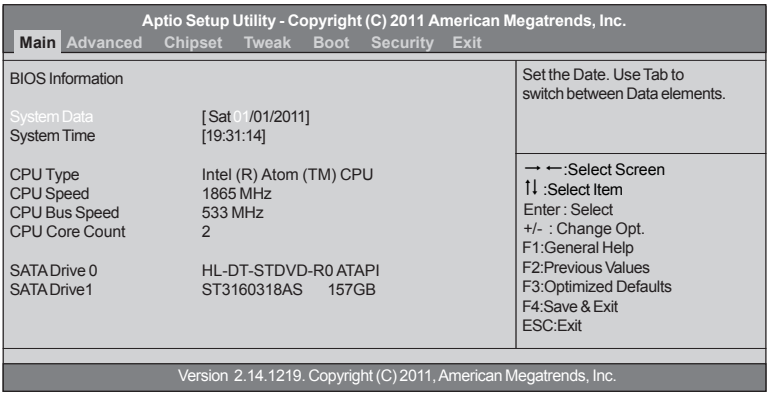
- when changing the system configuration
- when a configuration error is detected and you are prompted to make changes to the Setup Utility
- when trying to resolve IRQ conflicts
- when making changes to the Power Management configuration
- when changing the password or making other changes to the Security Setup

Entering the Setup Utility

When you power on the system, BIOS enters the Power-On Self Test (POST) routines. POST is a series of built-in diagnostics performed by the BIOS. After the POST routines are completed, the following message appears:

Press DEL or F2 to enter SETUP

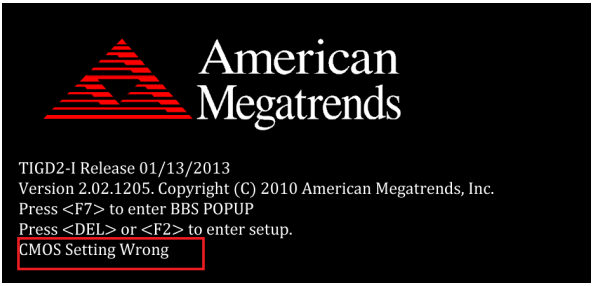
Press the delete or F2 key to access BIOS Setup Utility.


Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
Main Advanced Chipset Tweak Boot Security Exit
BIOS Information
System Data [Sat 01/01/2011]
System Time [19:31:14]
CPU Type Intel (R) Atom (TM) CPU
CPU Speed 1865 MHz
CPU Bus Speed 533 MHz
CPU Core Count 2
SATA Drive 0 HL-DT-STDVD-R0 ATAPI
SATA Drive1 ST3160318AS 157GB
Set the Date. Use Tab to switch between Data elements.
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.14.1219. Copyright (C) 2011, American Megatrends, Inc.

Resetting the Default CMOS Values

When powering on for the first time, the POST screen may show a "CMOS Settings Wrong" message. This standard message will appear following a clear CMOS data at factory by the manufacturer. You simply need to Load Default Settings to reset the default CMOS values.

Note: Changes to system hardware such as different CPU, memories, etc. may also trigger this message.


American Megatrends
TIGD2-I Release 01/13/2013
Version 2.02.1205. Copyright (C) 2010 American Megatrends, Inc.
Press <F7> to enter BBS POPUP
Press <DEL> or <F2> to enter setup.
CMOS Setting Wrong

Using BIOS

When you start the Setup Utility, the main menu appears. The main menu of the Setup Utility displays a list of the options that are available. A highlight indicates which option is currently selected. Use the cursor arrow keys to move the highlight to other options. When an option is highlighted, execute the option by pressing <Enter>.

Some options lead to pop-up dialog boxes that prompt you to verify that you wish to execute that option. Other options lead to dialog boxes that prompt you for information.

Some options (marked with a triangle ▶) lead to submenus that enable you to change the values for the option. Use the cursor arrow keys to scroll through the items in the submenu.

In this manual, default values are enclosed in parenthesis. Submenu items are denoted by a triangle ▶.

The default BIOS setting for this motherboard apply for most conditions with optimum performance. We do not suggest users change the default values in the BIOS setup and take no responsibility to any damage caused by changing the BIOS settings.

BIOS Navigation Keys

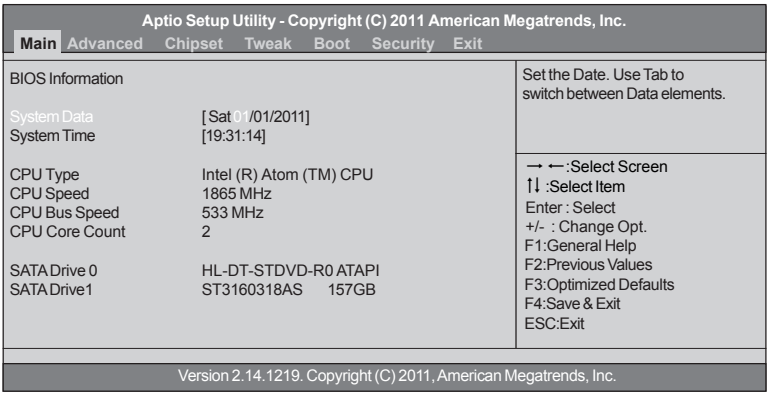
The BIOS navigation keys are listed below:

KEY	FUNCTION
ESC	Exits the current menu
↑↓→←	Scrolls through the items on a menu
+/-	Change Opt.
Enter	Select
F1	General Help
F2	Previous Value
F3	Optimized Defaults
F4	Save & Exit

For the purpose of better product maintenance, the manufacture reserves the right to change the BIOS items presented in this manual. The BIOS setup screens shown in this chapter are for reference only and may differ from the actual BIOS. Please visit the manufacture's website for updated manual.

Main Menu

When you enter the BIOS Setup program, the main menu appears, giving you an overview of the basic system information. Select an item and press <Enter> to display the submenu.

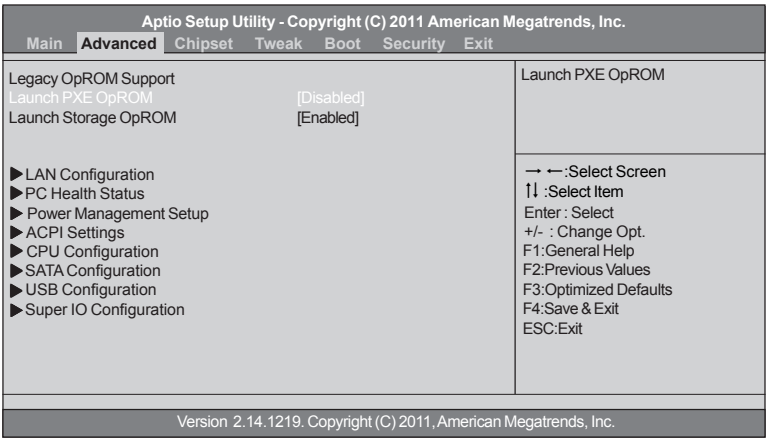

Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
Main Advanced Chipset Tweak Boot Security Exit
BIOS Information
System Data [Sat 01/01/2011]
System Time [19:31:14]
CPU Type Intel (R) Atom (TM) CPU
CPU Speed 1865 MHz
CPU Bus Speed 533 MHz
CPU Core Count 2
SATA Drive 0 HL-DT-STDVD-R0 ATAPI
SATA Drive1 ST3160318AS 157GB
Set the Date. Use Tab to switch between Data elements.
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.14.1219. Copyright (C) 2011, American Megatrends, Inc.

Date & Time

The Date and Time items show the current date and time on the computer. If you are running a Windows OS, these items are automatically updated whenever you make changes to the Windows Date and Time Properties utility.

Advanced Menu

The Advanced menu items allow you to change the settings for the CPU and other system.



Launch PXE OpROM (Disabled)

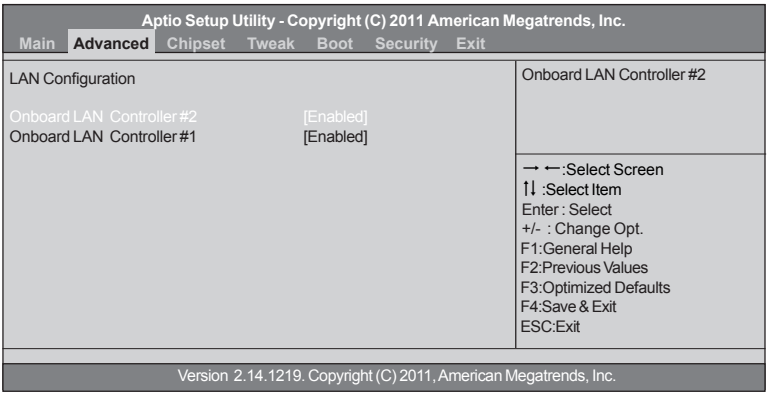
Use this item to enable or disable the PXE OpROM.

Launch Storage OpROM (Enabled)

Use this item to enable or disable the Storage OpROM.

▶LAN Configuration

The item in the menu shows the LAN-related information that the BIOS automatically detects.


Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
Main Advanced Chipset Tweak Boot Security Exit
LAN Configuration
Onboard LAN Controller #2 [Enabled]
Onboard LAN Controller #1 [Enabled]
Onboard LAN Controller #2
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.14.1219. Copyright (C) 2011, American Megatrends, Inc.

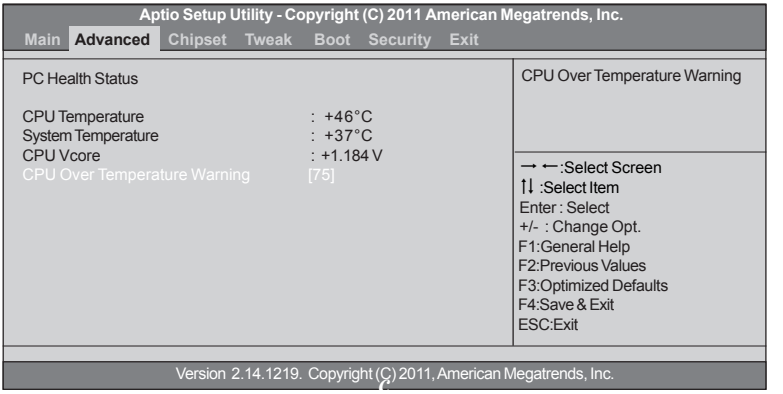
Onboard LAN Controller #2/#1 (Enabled)

Use this item to enable or disable the Onboard LAN.

Press <Esc> to return to the Advanced Menu page.

►PC Health Status

On motherboards support hardware monitoring, this item lets you monitor the parameters for critical voltages, temperatures and fan speeds.


Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
Main Advanced Chipset Tweak Boot Security Exit
PC Health Status
CPU Temperature : +46°C
System Temperature : +37°C
CPU Vcore : +1.184 V
CPU Over Temperature Warning [75]
CPU Over Temperature Warning
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.14.1219. Copyright (C) 2011, American Megatrends, Inc.

System Component Characteristics

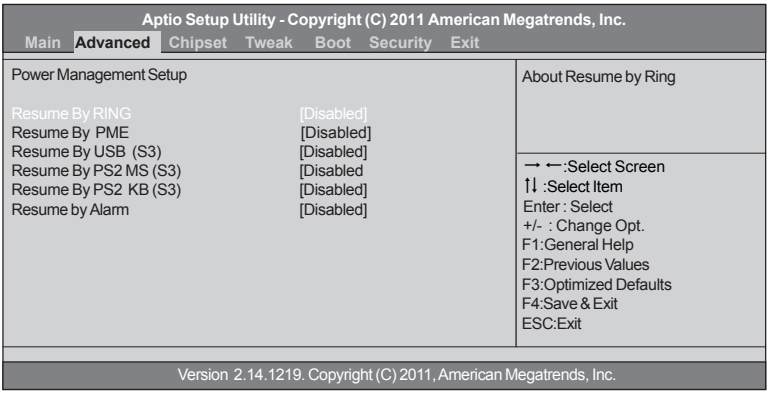
These items display the monitoring of the overall inboard hardware health events, such as CPU & system temperature, CPU core voltage... etc.

- CPU Temperature
- System temperature
- CPU Vcore
- CPU Over Temperature Warning

Press <Esc> to return to the Advanced Menu page.

►Power Management Setup

This page sets up some parameters for system power management operation.


Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
Main Advanced Chipset Tweak Boot Security Exit
Power Management Setup
Resume By RING [Disabled]
Resume By PME [Disabled]
Resume By USB (S3) [Disabled]
Resume By PS2 MS (S3) [Disabled
Resume By PS2 KB (S3) [Disabled]
Resume by Alarm [Disabled]
About Resume by Ring
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.14.1219. Copyright (C) 2011, American Megatrends, Inc.

Resume By RING (Disabled)

The system can be turned off with a software command. If you enable this item, the system can automatically resume if there is an incoming call on the Modem. You must use an ATX power supply in order to use this feature.

Resume By PME (Disabled)

The system can be turned off with a software command. If you enable this item, the system can automatically resume if there is an incoming call on the PCI Modem or PCI LAN card. You must use an ATX power supply in order to use this feature. Use this item to do wake-up action if inserting the PCI card.

Resume By PS2 KB (S3) (Disabled)

This item enables or disables you to allow keyboard activity to awaken the system from power saving mode.

Resume By USB (S3) (Disabled)

This item allows you to enable/disable the USB device wakeup function from S3 mode.

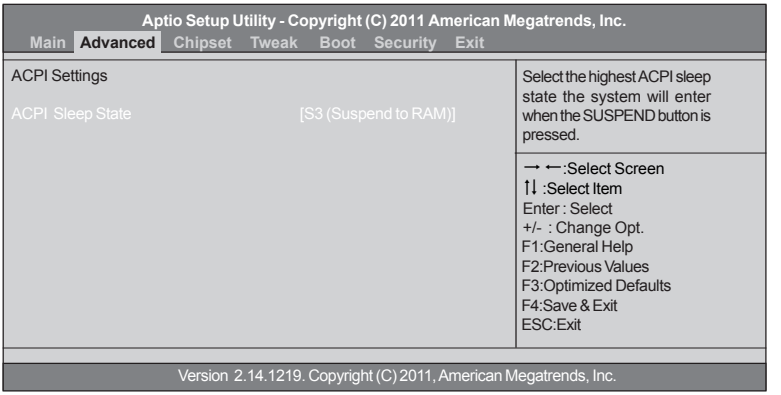
Resume by Alarm (Disabled)

This item allows users to enable or disable the alarm to wake up the system. If set to Enabled, users can specify the specific day of month and the exact time to power up the system.

Press <Esc> to return to the Advanced Menu page.

▶ACPI Setting

The item in the menu shows the highest ACPI sleep state when the system enters suspend.


Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
Main Advanced Chipset Tweak Boot Security Exit
ACPI Settings
ACPI Sleep State [S3 (Suspend to RAM)]
Select the highest ACPI sleep state the system will enter when the SUSPEND button is pressed.
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.14.1219. Copyright (C) 2011, American Megatrends, Inc.

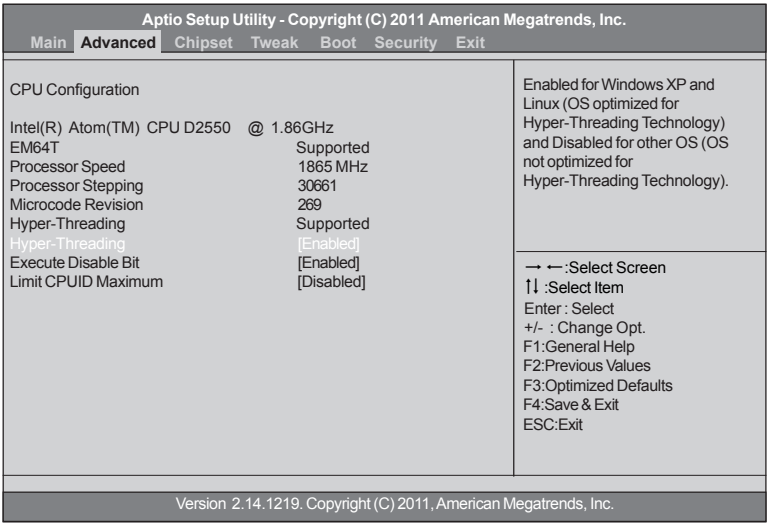
ACPI Sleep State (S3(Suspend to RAM))

This item allows user to enter the ACPI S3 (Suspend to RAM) Sleep State (default).

Press <Esc> to return to the Advanced Menu page.

▶CPU Configuration

Scroll to this item and press <Enter> to view the following screen:


Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
Main Advanced Chipset Tweak Boot Security Exit
CPU Configuration
Intel(R) Atom(TM) CPU D2550 @ 1.86GHz
EM64T Supported
Processor Speed 1865 MHz
Processor Stepping 30661
Microcode Revision 269
Hyper-Threading Supported
Hyper-Threading [Enabled]
Execute Disable Bit [Enabled]
Limit CPUID Maximum [Disabled]
Enabled for Windows XP and Linux (OS optimized for Hyper-Threading Technology) and Disabled for other OS (OS not optimized for Hyper-Threading Technology).
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.14.1219. Copyright (C) 2011, American Megatrends, Inc.

Intel(R) Atom(TM) CPU D2550 @ 1.86GHz
This is display-only field and displays the information of the CPU installed in your computer.

EM64T (Supported)
This item shows the computer supports EMT64.

Processor Speed (1865MHz)
This item shows the current processor speed.

Processor Stepping (30661)
This item shows the processor stepping version.

Microcode Revision (269)
This item shows the Microcode version.

Hyper-Threading Technology (Supported)
This item shows that your computer supports Intel HT technology or not.

Hyper-Threading (Enabled)
This item is only available when the chipset supports Hyper-Threading and you are using a Hyper-Threading CPU.

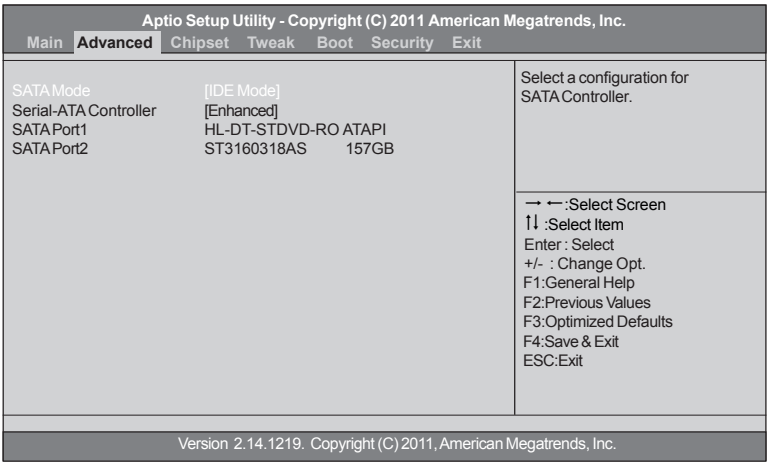
Execute Disable Bit (Enabled)
This item allows the processor to classify areas in memory by where application code can execute and where it cannot. When a malicious worm attempts to insert code in the buffer, the processor disables code execution, preventing damage or worm propagation. Replacing older computers with Execute Disable Bit enabled systems can halt worm attacks, reducing the need for virus related repair.

Limit CPUID Maximum (Disabled)
Use this item to enable or disable the maximum CPUID value limit.

Press <Esc> to return to the Advanced Menu page.

►SATA Configuration

Use this item to show the mode of serial SATA configuration options.


Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
Main Advanced Chipset Tweak Boot Security Exit
SATA Mode [IDE Mode]
Serial-ATA Controller [Enhanced]
SATA Port1 HL-DT-STDVD-RO ATAPI
SATA Port2 ST3160318AS 157GB
Select a configuration for SATA Controller.
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.14.1219. Copyright (C) 2011, American Megatrends, Inc.

SATA Mode (IDE Mode)

Use this item to select SATA mode.

Serial-ATA Controller (Enhanced)

Use this item to select SATA mode.

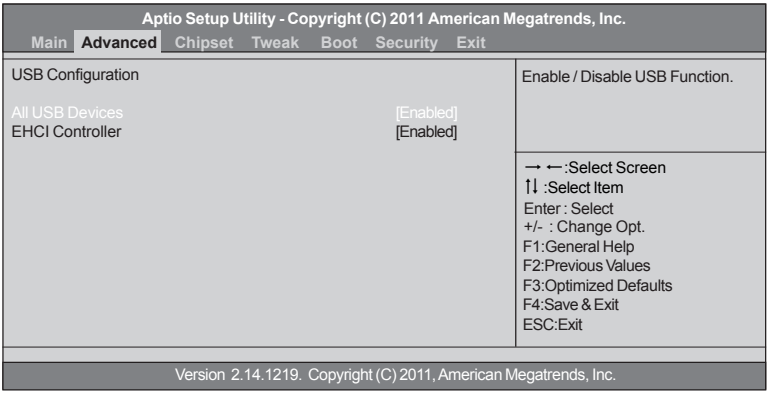
SATA Port 1/2 (HL-DT-STDVD-RO ATAPI / ST3160318AS 157GB)

This motherboard supports two SATA channels and each channel allows one SATA device to be installed. Use these items to configure each device on the SATA channel.

Press <Esc> to return to the Advanced Menu page.

►USB Configuration

Scroll to this item and press <Enter> to view the following screen:



All USB Devices (Enabled)

Use this item to enable or disable all USB devices.

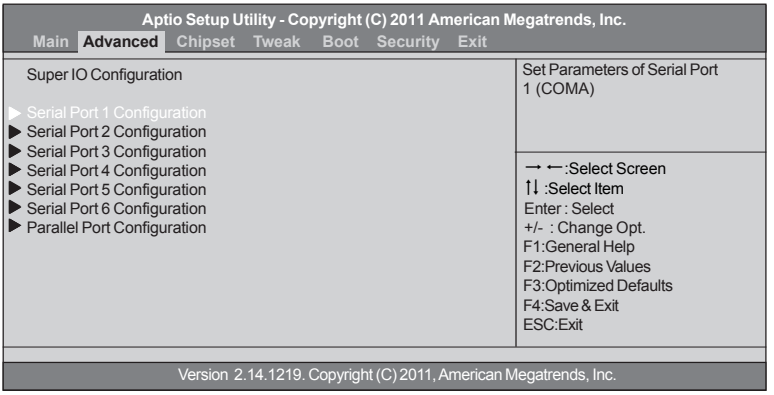
EHCI Controller (Enabled)

Use this item to enable or disable support for legacy USB devices. Setting to Audio allows the system to detect the presence of the USB device at startup. If detected, the USB controller legacy mode is enabled. If no USB device is detected, the legacy USB support is disabled.

Press <Esc> to return to the Advanced Menu page.

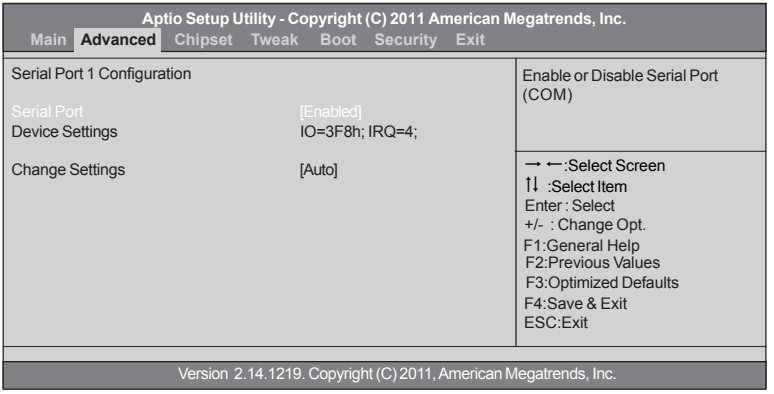
►Super IO Configuration

Use this item to show the information of the Super IO Configuration. Please do not change IRQ or I/O port at random.


Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
Main Advanced Chipset Tweak Boot Security Exit
Super IO Configuration
► Serial Port 1 Configuration
► Serial Port 2 Configuration
► Serial Port 3 Configuration
► Serial Port 4 Configuration
► Serial Port 5 Configuration
► Serial Port 6 Configuration
► Parallel Port Configuration
Set Parameters of Serial Port 1 (COMA)
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.14.1219. Copyright (C) 2011, American Megatrends, Inc.

►Serial Port 1 Configuration

Scroll to this item and press <Enter> to view the following screen:


Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
Main Advanced Chipset Tweak Boot Security Exit
Serial Port 1 Configuration
Serial Port [Enabled]
Device Settings IO=3F8h; IRQ=4;
Change Settings [Auto]
Enable or Disable Serial Port (COM)
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.14.1219. Copyright (C) 2011, American Megatrends, Inc.

Serial Port (Enabled)

This item allows you to enable or disable serial port.

Device Settings (IO=3F8h; IRQ=4)

This item shows the information of the device settings.

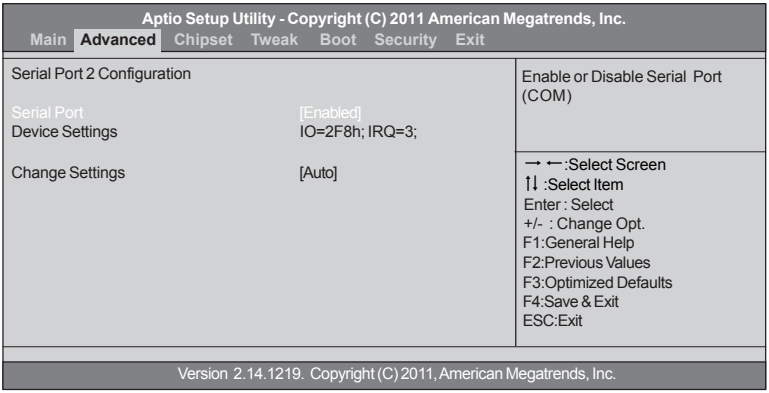
Change Settings (Auto)

Use this item to change device settings.

Press <Esc> to return to the Super IO Configuration page.

▶Serial Port 2 Configuration

Scroll to this item and press <Enter> to view the following screen:


Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
Main Advanced Chipset Tweak Boot Security Exit
Serial Port 2 Configuration
Serial Port [Enabled]
Device Settings IO=2F8h; IRQ=3;
Change Settings [Auto]
Enable or Disable Serial Port (COM)
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.14.1219. Copyright (C) 2011, American Megatrends, Inc.

Serial Port (Enabled)

This item allows you to enable or disable serial port.

Device Settings (IO=2F8h; IRQ=3)

This item shows the information of the device settings.

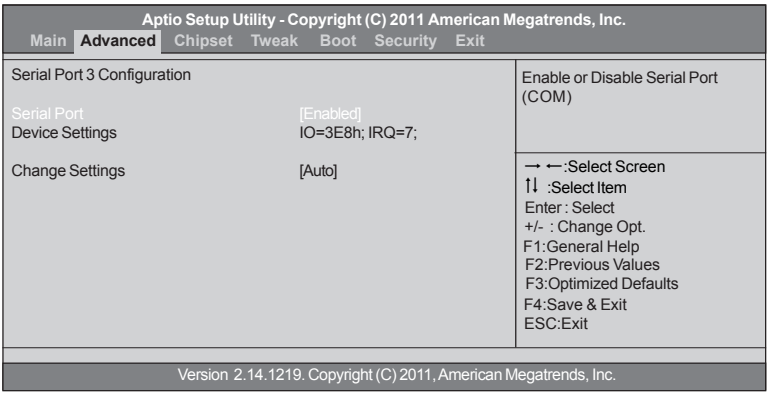
Change Settings (Auto)

Use this item to change device settings.

Press <Esc> to return to the Super IO Configuration page.

▶Serial Port 3 Configuration

Scroll to this item and press <Enter> to view the following screen:


Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
Main Advanced Chipset Tweak Boot Security Exit
Serial Port 3 Configuration
Serial Port [Enabled]
Device Settings IO=3E8h; IRQ=7;
Change Settings [Auto]
Enable or Disable Serial Port (COM)
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.14.1219. Copyright (C) 2011, American Megatrends, Inc.

Serial Port (Enabled)

This item allows you to enable or disable serial port.

Device Settings (IO=3E8h; IRQ=7)

This item shows the information of the device settings.

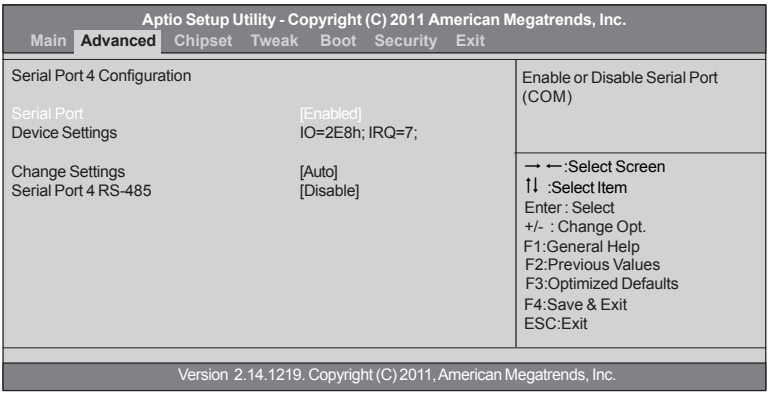
Change Settings (Auto)

Use this item to change device settings.

Press <Esc> to return to the Super IO Configuration page.

►Serial Port 4 Configuration

Scroll to this item and press <Enter> to view the following screen:


Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
Main Advanced Chipset Tweak Boot Security Exit
Serial Port 4 Configuration
Serial Port [Enabled]
Device Settings IO=2E8h; IRQ=7;
Change Settings [Auto]
Serial Port 4 RS-485 [Disable]
Enable or Disable Serial Port (COM)
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.14.1219. Copyright (C) 2011, American Megatrends, Inc.

Serial Port (Enabled)

This item allows you to enable or disable serial port.

Device Settings (IO=2E8h; IRQ=7)

This item shows the information of the device settings.

Change Settings (Auto)

Use this item to change device settings.

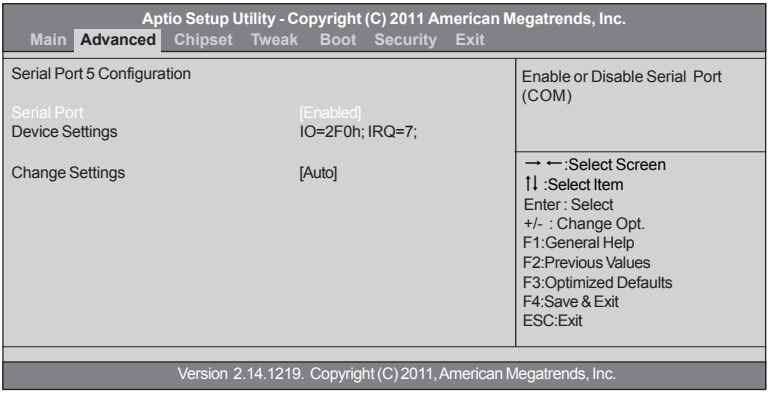
Serial Port 4 RS-485 (Disable)

Use this item to enable or disable the serial port 4 RS-485.

Press <Esc> to return to the Super IO Configuration page.

▶Serial Port 5 Configuration

Scroll to this item and press <Enter> to view the following screen:


Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
Main Advanced Chipset Tweak Boot Security Exit
Serial Port 5 Configuration
Serial Port [Enabled]
Device Settings IO=2F0h; IRQ=7;
Change Settings [Auto]
Enable or Disable Serial Port (COM)
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.14.1219. Copyright (C) 2011, American Megatrends, Inc.

Serial Port (Enabled)

This item allows you to enable or disable serial port.

Device Settings (IO=2F0h; IRQ=7)

This item shows the information of the device settings.

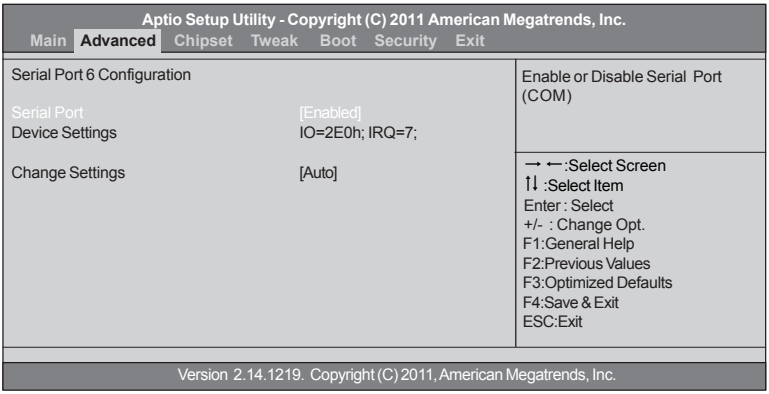
Change Settings (Auto)

Use this item to change device settings.

Press <Esc> to return to the Super IO Configuration page.

▶Serial Port 6 Configuration

Scroll to this item and press <Enter> to view the following screen:

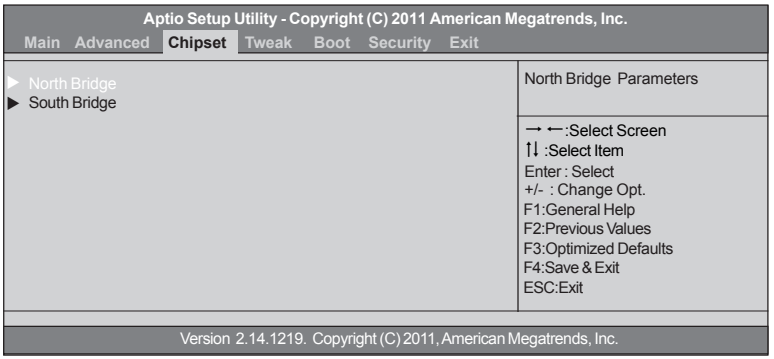

Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
Main Advanced Chipset Tweak Boot Security Exit
Serial Port 6 Configuration
Serial Port [Enabled]
Device Settings IO=2E0h; IRQ=7;
Change Settings [Auto]
Enable or Disable Serial Port (COM)
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.14.1219. Copyright (C) 2011, American Megatrends, Inc.

Serial Port (Enabled)

This item allows you to enable or disable serial port.

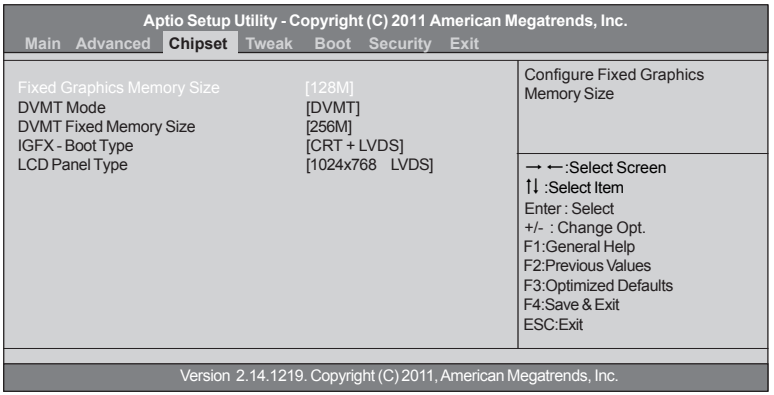
Chipset Menu

The chipset menu items allow you to change the settings for the North Bridge chipset, South Bridge chipset and other system.



►North Bridge

Scroll to this item and press <Enter> and view the following screen:


Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
Main Advanced Chipset Tweak Boot Security Exit
Fixed Graphics Memory Size [128M]
DVMT Mode [DVMT]
DVMT Fixed Memory Size [256M]
IGFX - Boot Type [CRT + LVDS]
LCD Panel Type [1024x768 LVDS]
Configure Fixed Graphics Memory Size
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.14.1219. Copyright (C) 2011, American Megatrends, Inc.

Fixed Graphics Memory Size (128M)

BIOS must assign a block of memory range to integrated Graphics. This item is used to select the size of this memory block.

DVMT Mode (DVMT)

DVMT is Dynamic Video Memory Technology. This item allows you to select video mode.

DVMT Fixed Memory Size (256M)

If support DVMT(Dynamic Video Memory Technology) feature, the system need to assign a block of memory range. This item is used to select the assigned memory size.

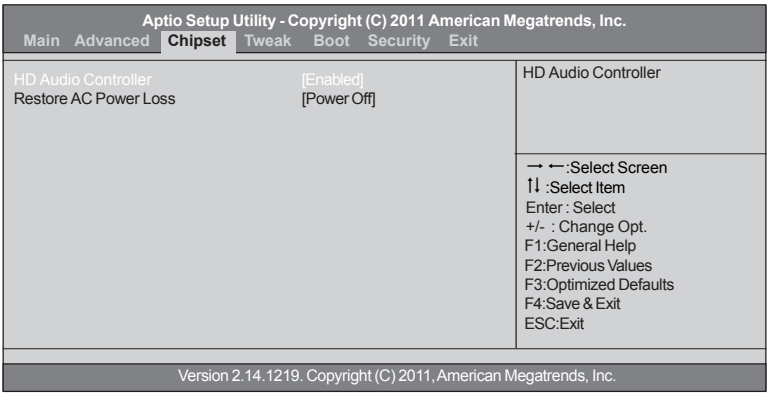
IGFX- Boot Type (CRT + LVDS)

This item allows you to select which type of display device to be used before loading VGA driver.

LCD Panel Type (1024x768 LVDS)
This item enables you to select which resolution to be used for LVDS panel.

Press <Esc> to return to the chipset menu page.

▶ **South Bridge**
Scroll to this item and press <Enter> to view the following screen:


Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
Main Advanced Chipset Tweak Boot Security Exit
HD Audio Controller [Enabled]
Restore AC Power Loss [Power Off]
HD Audio Controller
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.14.1219. Copyright (C) 2011, American Megatrends, Inc.

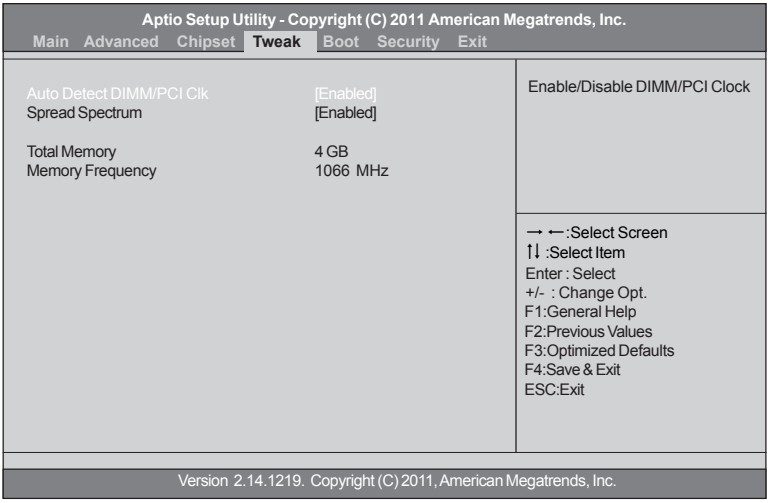
HD Audio Controller (Enabled)
This item enables or disables Azalia HD audio.

Restore AC Power Loss (Power Off)
This item enables your computer to automatically restart or return to its operating status.

Press <Esc> to return to the chipset menu page.

Tweak Menu

This page enables you to set the clock speed and system bus for your system. The clock speed and system bus are determined by the kind of processor you have installed in your system.



Auto Detect DIMM/PCI Clk (Enabled)

When this item is enabled, BIOS will disable the clock signal of free DIMM/PCI slots.

Spread Spectrum (Enabled)

If you enable spread spectrum, it can significantly reduce the EMI (Electro-Magnetic Interference) generated by the system.

Total Memory (4 GB)

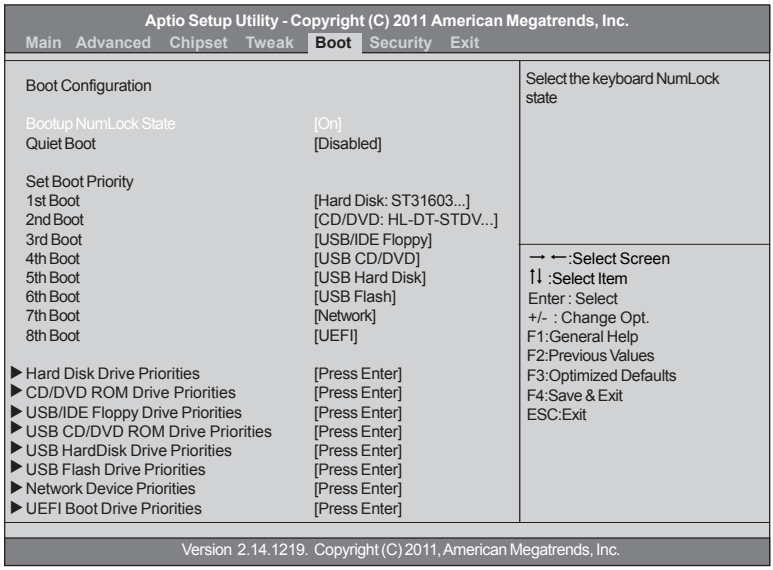
This item shows the total memory of DDR3.

Memory Frequency (1066 MHz)

This item shows the memory frequency.

Boot Menu

This page enables you to set the keyboard NumLock state.


Aptio Setup Utility - Copyright (C) 2011 American Megatrends, Inc.
Main Advanced Chipset Tweak Boot Security Exit
Boot Configuration
Bootup NumLock State [On]
Quiet Boot [Disabled]
Set Boot Priority
1st Boot [Hard Disk: ST31603...]
2nd Boot [CD/DVD: HL-DT-STDV...]
3rd Boot [USB/IDE Floppy]
4th Boot [USB CD/DVD]
5th Boot [USB Hard Disk]
6th Boot [USB Flash]
7th Boot [Network]
8th Boot [UEFI]
▶ Hard Disk Drive Priorities [Press Enter]
▶ CD/DVD ROM Drive Priorities [Press Enter]
▶ USB/IDE Floppy Drive Priorities [Press Enter]
▶ USB CD/DVD ROM Drive Priorities [Press Enter]
▶ USB HardDisk Drive Priorities [Press Enter]
▶ USB Flash Drive Priorities [Press Enter]
▶ Network Device Priorities [Press Enter]
▶ UEFI Boot Drive Priorities [Press Enter]
Select the keyboard NumLock state
→ ←:Select Screen
↑↓ :Select Item
Enter : Select
+/- : Change Opt.
F1:General Help
F2:Previous Values
F3:Optimized Defaults
F4:Save & Exit
ESC:Exit
Version 2.14.1219. Copyright (C) 2011, American Megatrends, Inc.

Boot Configuration

This item shows the information of the boot configuration.

Bootup NumLock State (On)

This item determines if the NumLock key is active or inactive at system start-up time.

Quiet Boot (Disabled)

If enabled, BIOS will show a full screen logo at boot, if disabled, BIOS will set the initial display mode to BIOS and show the diagnostic POST screen at boot.

Set Boot Priority

This item enables you to select boot priority for all boot devices.

1st/2nd/3rd/4th/5th/6th/7th/8th Boot

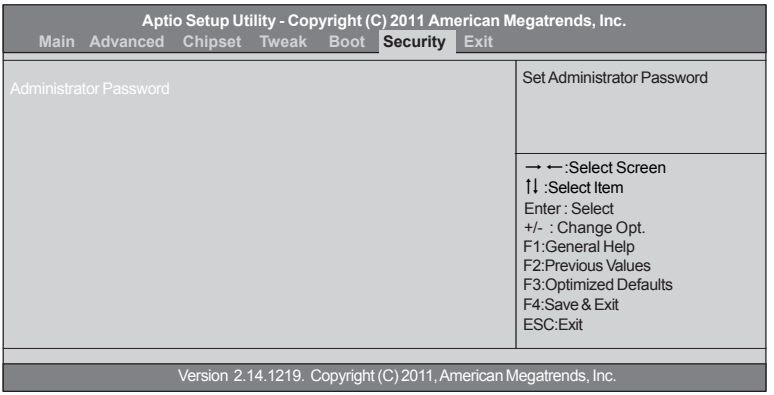
These items show the boot priorities.

Hard Disk Drive / CD/DVD ROM Drive / USB/IDE Floppy Drive / USB CD/DVD ROM Drive / USB HardDisk Drive / USB Flash Drive / Network Device / UEFI Boot Drive Priorities

These items enable you to specify the sequence of loading the operating system. Press <Enter> to see the submenu.

Security Menu

This page enables you to set setup administrator and password.

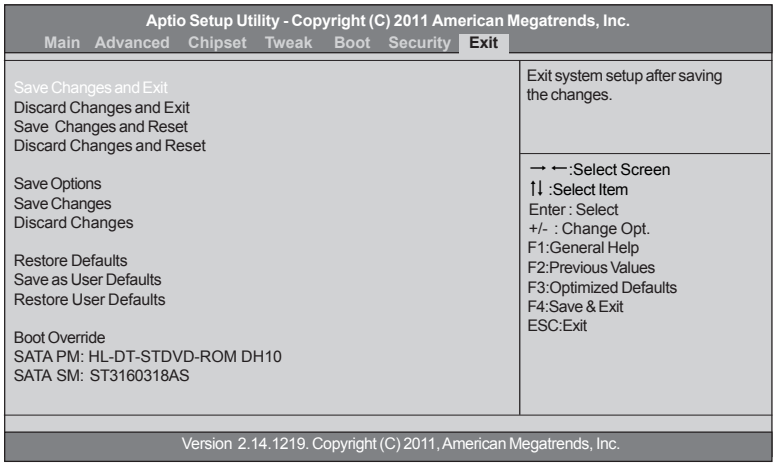


Administrator Password

This item allows you to set up the administrator password.

Exit Menu

This page enables you to exit system setup after saving or without saving the changes.



Save Changes and Exit

This item enables you to save the changes that you have made and exit.

Discard Changes and Exit

This item enables you to discard any changes that you have made and exit.

Save Changes and Reset

This item enables you to save the changes that you have made and reset.

Discard Changes and Reset

This item enables you to discard any changes that you have made and reset.

Save Options

This item enables you to save the options that you have made.

Save Changes

This item enables you to save the changes that you have made.

Discard Changes

This item enables you to discard any changes that you have made.

Restore Defaults

This item enables you to restore the system defaults.

Save as User Defaults

This item enables you to save the changes that you have made as user defaults.

Restore User Defaults

This item enables you to restore user defaults.

Boot Override

Use this item to select the boot device.

Updating the BIOS

You can download and install updated BIOS for this motherboard from the manufacturer's Web site. New BIOS provides support for new peripherals, improvements in performance, or fixes for known bugs. Install new BIOS as follows:

1. If your motherboard has a BIOS protection jumper, change the setting to allow BIOS flashing.
2. If your motherboard has an item called Firmware Write Protect in Advanced BIOS features, disable it. (Firmware Write Protect prevents BIOS from being overwritten.)
3. Prepare a bootable device or create a bootable system disk. (Refer to Windows online help for information on creating a bootable system disk.)
4. Download the Flash Utility and new BIOS file from the manufacturer's Web site. Copy these files to the bootable device.
5. Turn off your computer and insert the bootable device in your computer. (You might need to run the Setup Utility and change the boot priority items on the Advanced BIOS Features Setup page, to force your computer to boot from the bootable device first.)
6. At the C:\ or A:\ prompt, type the Flash Utility program name and the file name of the new BIOS and then press <Enter>. Example: AFUDOS.EXE 040706.ROM
7. When the installation is complete, remove the bootable device from the computer and restart your computer. If your motherboard has a Flash BIOS jumper, reset the jumper to protect the newly installed BIOS from being overwritten. The computer will restart automatically.

This concludes Chapter 3. Refer to the next chapter for information on the software supplied with the motherboard.

Chapter 4
Trouble Shooting

Start up problems during assembly

After assembling the PC for the first time you may experience some start up problems. Before calling for technical support or returning for warranty, this chapter may help to address some of the common questions using some basic troubleshooting tips. You may also log onto our website for more information.

a) System does not power up and the fans are not running.

1. Disassemble the PC to remove the VGA adaptor card, DDR memory, LAN, USB and other peripherals including keyboard and mouse. Leave only the motherboard, CPU with CPU cooler and power supply connected. Make sure the power cord is plugged into the wall socket & the switch on the Power Supply Unit (PSU) is turned " on " as well. Turn on again to see if the CPU and power supply fans are running.

2. Make sure to remove any unused screws or other metal objects such as screwdrivers from the inside PC case. This is to prevent damage from short circuit.

3. Check the CPU FAN connector is connected to the motherboard.

4. Check the 12V power connector is connected to the motherboard.

5. Check that the 12V power & ATX connectors are fully inserted into the motherboard connectors. Make sure the latches of the cable and connector are locked into place.

b) Power is on, fans are running but there is no display

1. Make sure the monitor is turned on and the monitor cable is properly connected to the PC.

2. Check the VGA adapter card (if applicable) is inserted properly.

3. Listen for beep sounds. If you are using internal PC speaker make sure it is connected.
   a. continuous 3 short beeps: memory not detected
   b. 1 long beep and 8 short beeps: VGA not detected

c) The PC suddenly shuts down while booting up.

1. The CPU may experience overheating so it will shutdown to protect itself. Apply the thermal grease onto the CPU heatsink & ensure the CPU fan is well-connected with the CPU heatsink. Check if the CPU fan is working properly while the system is running.

2. From the BIOS setting, try to disable the Smartfan function to let the fan run at default speed. Doing a Load Optimised Default will also disable the Smartfan.

Start up problems after prolong use

After a prolong period of use your PC may experience start up problems again. This may be caused by breakdown of devices connected to the motherboard such as HDD, CPU fan, etc. The following tips may help to revive the PC or identify the cause of failure.

1. Clear the CMOS values using the CLR_CMOS jumper. Refer to CLR_CMOS jumper in Chapter 2 for Checking Jumper Settings in this user manual. When completed, follow up with a Load Optimised Default in the BIOS setup.

2. Check the CPU cooler fan for dust. Long term accumulation of dust will reduce its effectiveness to cool the processor. Clean the cooler or replace a new one if necessary.

3. Check that the 12V power & ATX connectors are fully inserted into the motherboard connectors. Make sure the latches of the cable and connector are locked into place.

4. Remove the hard drive, optical drive or DDR memory to determine which of these components may be at fault.

5. Check whether there is any bulked up electrolytic capacitor or abnormal component.

Maintenance and care tips

Your computer, like any electrical appliance, requires proper care and maintenance. Here are some basic PC care tips to help prolong the life of the motherboard and keep it running as best as it can.

1. Keep your computer in a well ventilated area. Leave some space between the PC and the wall for sufficient airflow.

2. Keep your computer in a cool dry place. Avoid dusty areas, direct sunlight and areas of high moisture content.

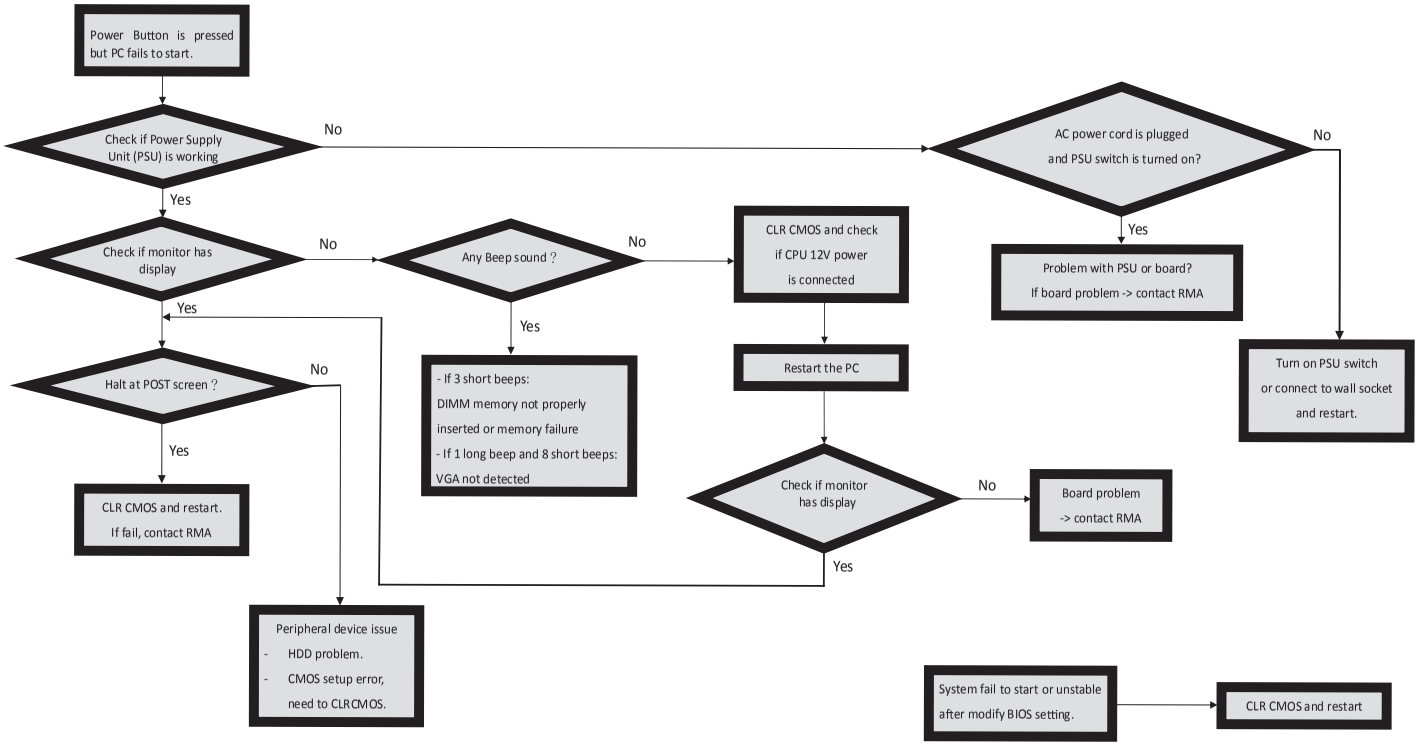
3. Routinely clean the CPU cooler fan to remove dust and hair.

4. In places of hot and humid weather you should turn on your computer once every other week to circulate the air and prevent damage from humidity.

5. Add more memory to your computer if possible. This not only speeds up the system but also reduces the loading of your hard drive to prolong its life span.

6. If possible, ensure the power cord has an earth ground pin directly from the wall outlet. This will reduce voltage fluctuation that may damage sensitive devices.

Basic Troubleshooting Flowchart


Power Button is pressed but PC fails to start.
Check if Power Supply Unit (PSU) is working
No
Yes
AC power cord is plugged and PSU switch is turned on?
No
Yes
Problem with PSU or board? If board problem -> contact RMA
Turn on PSU switch or connect to wall socket and restart.
Check if monitor has display
No
Yes
Any Beep sound ?
No
Yes
CLR CMOS and check if CPU 12V power is connected
Restart the PC
Check if monitor has display
No
Board problem -> contact RMA
Yes
- If 3 short beeps: DIMM memory not properly inserted or memory failure
- If 1 long beep and 8 short beeps: VGA not detected
Halt at POST screen ?
No
Yes
CLR CMOS and restart. If fail, contact RMA
Peripheral device issue
- HDD problem.
- CMOS setup error, need to CLRCMOS.
System fail to start or unstable after modify BIOS setting.
CLR CMOS and restart

Memo